

REMARKS

Claims 1-36 are now pending in the application. The amendments to the claims contained herein are of equivalent scope as originally filed and, thus, are not a narrowing amendment. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-8, 14-18, 23-28 and 34 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Abraham (U.S. Pat. No. 6,722,876). This rejection is respectfully traversed.

With regard to independent claims 14, 23 and 34, these claims require a fuse to be connected directly in series with the gas valve solenoid so as to interrupt a thermocouple voltage to the gas valve solenoid. The Office Action recites a disconnection means (gas valve control 14) that comprises a fuse F1 (shown in Fig. 4). However, this fuse F1 is not connected directly in series with the gas valve solenoid so as to interrupt the thermocouple voltage to the solenoid. Rather, the fuse F1 shown in Fig. 4 of Abraham is in series with a voltage V_r and GND, and no current is conducted through the fuse F1 until the Field Effect Transistor Q1 is gated by the sensor R3. (column 3 lines 42-46). Thus, the fuse F1 cannot conduct any current from the voltage source V_r until the FET switches on, at which time the fuse blows (column 3 line 46).

Here, in claims 14, 23, and 34, the fuse is directly in series with the gas valve solenoid, and a current from the thermocouple voltage source is conducted through the fuse to the gas valve solenoid to operate the gas valve and allow the flow of gas. Claims 14, 23, and 34 require the fuse to be connected in series with the gas valve

solenoid such that the fuse can blow and interrupt the current generated by the thermocouple voltage to the gas valve solenoid, to cause the flow of gas to be shut off (paragraph 18, sentence 4 of the specification). In Abraham, the microprocessor circuit is set up to shut off the flow of gas. Abraham does not teach or disclose a fuse that may be connected directly in series with the gas valve solenoid so as to interrupt the thermocouple voltage to effect shut off of gas flow. The control of Abraham utilizes a microprocessor circuit that is both costly and power consuming. The novel circuits in claims 14, 23, and 34 do not require the use of a microprocessor, and require less battery power than a microprocessor circuit to provide longer battery life. Thus, applicants submit that Abraham does not anticipate a fuse in series with a gas valve solenoid as required in claim 14, and that such a design would also not be obvious in view of the cited art. As such, applicants believe claims 14, 23, and 34 are allowable.

With regard to dependent claims 15-18 and 24-28, these claims ultimately depend from either independent base claim 14 or 23, which applicants believe to be allowable in view of the above remarks. For at least these reasons, applicants believe claims 15-18 and 24-28 are also allowable.

REJECTION UNDER 35 U.S.C. § 103

Claims 9-13, 19-22, 29-33, and 32-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Abraham (U.S. Pat. No. 6,722,876) in view of &&&?. This rejection is respectfully traversed.

With regard to dependent claims 9-13, 19-22, 29-33 and 32-36, these claims ultimately depend from independent base claim 14, 23 or 34, which applicants believe to be allowable. Specifically, these independent claims require a fuse to be connected

directly in series with the gas valve solenoid so as to interrupt a thermocouple voltage to the gas valve solenoid. The fuse F1 in Abraham is not connected directly in series with the gas valve solenoid so as to interrupt the thermocouple voltage to the solenoid. Rather, the fuse F1 shown in Fig. 4 of Abraham is in series with a voltage V_r and GND, and no current is conducted through the fuse F1 until the Field Effect Transistor Q1 is gated by the sensor R3. (column 3 lines 42-46). Thus, the fuse F1 in Abraham cannot conduct any current from the voltage source V_r until the FET switches on, at which time the fuse blows (column 3 line 46).

In independent claims 14, 23, and 34, the fuse is directly in series with the gas valve solenoid, and a current from the thermocouple voltage source is conducted through the fuse to the gas valve solenoid to operate the gas valve and allow the flow of gas. Claims 14, 23, and 34 require the fuse to be connected in series with the gas valve solenoid such that the fuse can blow and interrupt the current generated by the thermocouple voltage to the gas valve solenoid, to cause the flow of gas to be shut off (paragraph 18, sentence 4 of the specification). In Abraham, the microprocessor circuit is set up to shut off the flow of gas. Abraham does not teach or disclose a fuse that may be connected directly in series with the gas valve solenoid so as to interrupt the thermocouple voltage to effect shut off of gas flow. The control of Abraham utilizes a microprocessor circuit that is both costly and power consuming. The novel circuits in claims 14, 23, and 34 do not require the use of a microprocessor, and require less battery power than a microprocessor circuit to provide longer battery life. Thus, Applicants submit that Abraham does not teach or suggest placing a fuse in series with a gas valve solenoid as required in claims 14, 23 and 34, and that these claims are not

obvious in view of the cited art. For at least these reasons, applicants believe that claims 15-18 and 24-28 which ultimately depend from 14, 23, or 34 are also allowable.

Claims 1-13 have been cancelled without prejudice. Applicants have amended the specification for solely for the purposes of indicating multiple embodiments and for improving the clarity of the specification.

CONCLUSION

It is believed that the stated grounds of rejection for claims 14-36 have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw the presently outstanding rejections of these claims. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (314) 726-7500.

Respectfully submitted,

Dated: 11-12-2004

By: Kevin Pumm

HARNESS, DICKEY & PIERCE, P.L.C.
7700 Bonhomme, Suite 400
St. Louis, Missouri, 63105
(314) 726-7500

Kevin M. Pumm, Reg. No. 49,046

[KMP/]